

## CLAIMS

What is claimed is:

- 1 1. A method for generating hair comprising:  
2 producing a plurality of hairs representative of a dry coat of hair; and  
3 modifying at least one area of hair to provide a visual effect, comprising  
4 for each area;  
5 identifying a hair of the plurality of hairs as a center hair.  
6 identifying an area size,  
7 indicating at least one area parameter,  
8 determining hairs of the plurality of hairs that are within the area  
9 as area hairs, the area located according to the center hair and the area  
10 size and  
11 orienting the area hairs according to at least one area parameter.
- 1 2. The method as set forth in claim 1, wherein the visual effect is selected  
2 from the group comprising clumping of hairs and breaking of hair.
- 1 3. The method as set forth in claim 1, wherein the at least one area  
2 parameter are selected from the group comprising clump-percent, clump-rate,  
3 break-rate, break-percent and break-vector.
- 1 4. The method as set forth in claim 3, wherein the at least one clump  
2 parameter comprises clump-percent, said step of orienting comprising  
3 adjusting a tip of each clump hair to be closer to the tip of the clump center hair,  
4 the amount of closeness corresponding to the clump-percent.
- 1 5. The method as set forth in claim 3, wherein the at least one clump  
2 parameter comprises clump-rate, the step of adjusting comprising adjusting the

3 clump hair to be attracted to the center hair, the degree of attraction  
4 corresponding to the clump-rate.

1 6. The method as set forth in claim 1, wherein the at least one area  
2 parameter is dynamically varied to provide animated effects.

3 7. The method as set forth in claim 6, wherein the animated effect  
4 comprises simulating water hitting hairs and making the hairs increasingly wet.

1 8. The method as set forth in claim 1, wherein the visual effect is breaking,  
2 said center hair comprising a break line hair that lies approximately on a fur  
3 track.

5 9. The method as set forth in claim 8, wherein one-sided breaking is  
performed, said step of adjusting comprises reorienting hairs away from a  
corresponding break line hair.

1 10. The method as set forth in claim 8, wherein symmetric breaking is  
2 performed, said step of adjusting comprising reorienting hairs with respect to a  
3 corresponding break line hair.

1 11. A method for generating hairs on a surface comprising:  
2 defining surface patches on the surface area;  
3 placing control hairs on each surface patch;  
4 indicating a global density value for the hairs;  
5 defining local points which define the area of the surface to be processed;  
6 approximating sub-area defined by polygons;  
7 averaging a number of hairs per square unit area across sub-areas;  
8 determining a total number of hairs per unit area; and

9 placing hairs in the sub-areas according to the total number of hairs per  
10 unit area.

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